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10/030,834	01/10/2002	Charles Bailey Neal	RCA 89633	2357

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EXAMINER

TRAN, TRANG U

ART UNIT

PAPER NUMBER

2614

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,834

Applicant(s)

NEAL, CHARLES BAILEY

Examiner

Trang U. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed Jan. 07, 2005 have been fully considered but they are not persuasive.

In re pages 5-6, applicant argues, with respect to claims 1 and 6, that Han does not teach or suggest an OSD generating means that provides OSD signals formatted in a first or second color format as recited in the present claims because the video image data is converted into a uniform color format (YCbCr 4:4:4) regardless of the color format of the original input signal.

In response, the examiner respectfully disagrees. Han discloses in col. 2, lines 11-21 that

"FIG. 1 shows a preferred embodiment of a HDTV video processor according to the present invention including a data receiver 1 processing and outputting a digital TV (DTV) video data, NTSC or VGA video data having different color formats, the format information and various control signals; a memory interfacier 3 selecting one of the data output by the data receiver and writing on or reading from a memory the selected data; a format converter 4 converting the selected video data from the memory interfacier into a uniform color format using the display and video format information from the data receiver".

From the above passage, it is clear the memory interfacier 3 selected one of the data having different color formats and the format converter 4 converting the selected video data from the memory interfacier into a uniform color format. In order to convert the data having different color formats to the uniform color format, the format converter 4 must know the inputted selected color format. Thus, Han does indeed disclose the

claimed OSD generating means that provides OSD signals formatted in a first or second color format as recited in claims 1 and 6.

In re page 7, applicant argues that claim 3 is patentably distinguishable over the cited references for the same reasons as discussed above with respect to claim 1.

In response, as discussed above with respect to claim 1, Han discloses the claimed OSD generating means that provides OSD signals formatted in a first or second color format.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han (US Patent No. 6,421,094 B1) in view of Fujimoto (US Patent No. 5,912,710).

In considering claim 1, Han discloses all the claimed subject matter, note 1) the claimed a video signal processing apparatus (Figs. 1 and 2), comprising: a first video signal source for providing a first video signal having a first color format is met by the NTSC or VGA video data which have the format information on each respective video data and various control signals (Figs. 1-2, col. 2, line 11-43 and col. 3, lines 47-63), 2) the claimed a second video signal source for providing a second video signal having a second color format is met by the DTV video data which has different color formats

(Figs. 1-2, col. 2, lines 11-43 and col. 3, lines 37-47), 3) the claimed means for generating an On Screen Display (OSD) signal formatted in accordance with the first or second color format is met by the OSD processor 14 which further includes a data converter 252 which receives and converts the OSD data output from the memory interfacier 13 into a uniform format and outputs a control signal to output the data in the selected OSD receiver (Figs. 1 and 3, col. 3, line 5 to col. 4, line 55), 4) the claimed a plurality of color conversion matrices for converting the color information in the color palette to provide the OSD signal, which is formatted in accordance with a selected one of the first or second color format, in response to a selection of the first or second video signal source is met by the data converter 151 which converts the read OSD data having a YCbCr color format of 4:4:4, 4:2:2, or 4:2:0 into one uniform YCbCr color format of 4:4:4 and outputs the converted data to the MUX 153 (Figs. 1-3, col. 3, line 5 to col. 4, line 55), and 5) the claimed means operatively coupled to the OSD generating means and the first and second video signal sources, for combining the OSD signal generated by the OSD generating means with the selected one of the first or second video signals is met by the multiplexer (MUX) 153 which receives the converted OSD data from the data converter 151 and the converted DTV or NTSC/VGA data from the format converter 14 according to the control signal from the data converter 151 (Figs. 1-3, col. 3, line 5 to col. 4, line 55).

However, Han explicitly does not disclose the claimed a color palette that includes color information formatted in accordance with a predetermined color format.

Fujimoto teaches that the RGB color palette circuit 104a converts the pixel data to RGB color data, for example, when one pixel of the graphics data is comprised of an index color mode having eight bits/pixel, the index color data are converted to a color data of twenty-four bits for the respective colors of R (red), G (green) and B (blue) (Fig. 1, col. 7, lines 1-23).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the RGB color palette as taught by Fujimoto into Han's system in order to optimize the hardware for an OSD data processing in converting data of various color formats and OSD formats into a uniform format.

In considering claim 2, the claimed wherein the color palette comprises color information formatted in the RGB format is met by the RGB color palette circuit 104a converts the pixel data to RGB color data (Fig. 1, col. 7, lines 1-23 of Fujimoto).

In considering claim 4, the claimed wherein the first video signal is an analog television signal is met by the NTSC or VGA video data which have the format information on each respective video data and various control signals (Figs. 1-2, col. 2, line 11-43 and col. 3, lines 47-63).

In considering claim 5, the claimed wherein the second video signal is a digital television signal is met by the DTV video data which has different color formats (Figs. 1-2, col. 2, lines 11-43 and col. 3, lines 37-47).

In considering claim 6, Han discloses all the claimed subject matter, note 1) the claimed a method of producing graphics having a color format that matches the color format of a received signal, the method comprising the steps of: selecting a video signal

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source from a plurality of video signal sources, the signal source providing video signals formatted in accordance with one of a first color signal format and a second color signal format is met by the data receiver 11 which receives and outputs a DTV video data, an NTSC or VGA video data, an OSD data and the memory interfacier 13 which selects the video data output from the data receiver and managing the writing/reading of the selected data on/from the memory 12 (Fig. 2, col. 2, line 38 to col. 3, line 10), 2) the claimed providing a plurality of color conversion matrices, wherein each color conversion matrix is adapted to convert the color information in the color palette to provide a graphics signal that is formatted in accordance with a particular color format is met by the data converter 151 which converts the read OSD data having a YCbCr color format of 4:4:4, 4:2:2, or 4:2:0 into one uniform YCbCr color format of 4:4:4 and outputs the converted data to the MUX 153 (Figs. 1-3, col. 3, line 5 to col. 4, line 55), 3) the claimed selecting a desired one of the plurality of color conversion matrices that corresponds to the selected video signal source and generating a graphics signal formatted in accordance with one of the first color signal format and the second color signal format in response to the video signal source selection is met by the host interfacier 112 which receives the DTV video format information from the frame controller 11, the NTSC and VGA mode signal and the host interface signal, and outputting an OSD data, display format information, input format information, and various control signals to select the desired one of the plurality of color conversion matrices (Fig. 2, col. 2, line 63 to col. 4, line 55), 4) the claimed combining the graphics signal with the received signal is met by the multiplexer (MUX) 153 which receives the

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converted OSD data from the data converter 151 and the converted DTV or NTSC/VGA data from the format converter 14 according to the control signal from the data converter 151 (Figs. 1-3, col. 3, line 5 to col. 4, line 55), and 5) the claimed processing the combined signal to generate an output signal is met by the color space converter 16, a Look Up Table (LUT) 17 further processing the OSD overlaid video data and displays on the monitor (Figs. 1-2, col. 4, line 56 to col. 5, line 23).

However, Han explicitly does not disclose the claimed providing a color palette that includes color information formatted in accordance with a predetermined color format.

Fujimoto teaches that the RGB color palette circuit 104a converts the pixel data to RGB color data, for example, when one pixel of the graphics data is comprised of an index color mode having eight bits/pixel, the index color data are converted to a color data of twenty-four bits for the respective colors of R (red), G (green) and B (blue) (Fig. 1, col. 7, lines 1-23).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the RGB color palette as taught by Fujimoto into Han's system in order to optimize the hardware for an OSD data processing in converting data of various color formats and OSD formats into a uniform format.

In considering claim 7, the claimed wherein the color palette comprises color information formatted in the RGB format is met by the RGB color palette circuit 104a converts the pixel data to RGB color data (Fig. 1, col. 7, lines 1-23 of Fujimoto).

In considering claim 8, the claimed wherein the color conversion matrices convert the color information in the color palette into one of a Y, PR, PB formatted signal and Y, PI, PQ formatted signal is met by the color space converter 104b which converts the RGB color data from the color palette circuit 104a to YCrCb television standard (Fig. 1, col. 7, lines 1-23 of Fujimoto).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Han (US Patent No. 6,421,094 B1) in view of Fujimoto (US Patent No. 5,912,710), as applied to claim 1 above, and further in view of Susumu Imai (JP 403268594 A (see abstract)).

In considering claim 3, the claimed wherein the plurality of conversion matrices includes a conversion matrix for converting the color information in the color palette into Y, PR, PB format is met by the color space converter 104b which converts the RGB color data from the color palette circuit 104a to YCrCb television standard (Fig. 1, col. 7, lines 1-23 of Fujimoto).

However, the combination of Han and Fujimoto explicitly do not disclose the claimed a conversion matrix for converting the color information in the color palette into Y, PI, PQ format.

Susumu Imai teaches that in an picture recoding system, an RGB-YIQ conversion part 2 executes the matrix conversion of a digital signal consisting of R, G and B components into a brightness component Y and color difference components I, Q and sends the converted components Y, I, Q to a digital recording part 5 (see abstract).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the RGB-YIQ matrix conversion as taught by Susumu

Imai into the combination of Han and Fujimoto's system in order to attain partial emphasis corresponding to human visual sense without damaging a gradation change by converting digital picture into a brightness component and color difference components (see abstract of Susumu).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT TT
June 7, 2005


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